Message

From: Daniel Snow [dsnow1@unl.edu]
Sent: 6/27/2018 5:18:27 PM
To: Burdett, Cheryl [burdett.cheryl@epa.gov]
CC: Maraldo, Dean [Maraldo.Dean@epa.gov]; Daisy Wang [daisy.wang@erg.com]
Subject: RE: Nitrate Analyses
Attachments: EPA_CSD_6wSampling.pdf; EPA_CSD6wSampling.pdf; EPA_CSD6wSampling_43677.pdf; EPA_CSD6wSampling_43684.pdf; EPA_CSD6wSampling_43689.pdf; EPA_CSD6wSampling_64161.pdf; EPA_CSD6wSampling_64165.pdf; EPA_CSD6wSampling_64167.pdf; M353_4.PDF

Cheryl,

Attached are the chain of custody forms for these samples. The sample were frozen immediately upon receipt as this is our standard preservation method for the isotope analysis. This is also the procedure used by the USGS isotope laboratory.

Water samples (not drinking water) for determination of nitrate-N (not nitrite) can either be frozen or acidifed with sulfuric acid. The problem with acid addition is that it can change the 18O composition of nitrate which is why we recommend freezing. I've attached a reference that indicates freezing is permissible. I think the main measurement you are interested in is the isotope determination, correct? It is not possible to measure 15N and 18O of nitrate within 48 hours of collection. The holding time issue for nitrate+nitrite-N determination does not seem to apply here.

The spreadsheet listing is nitrate+nitrite-N concentration as determined by the Cd-reduction method. Please feel free to call if I can answer any additional questions. Thanks! -Dan

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From: Burdett, Cheryl <burdett.cheryl@epa.gov>
Sent: Wednesday, June 27, 2018 11:57 AM
To: Daniel Snow <dsnow1@unl.edu>
Cc: Maraldo, Dean <Maraldo.Dean@epa.gov>; Daisy Wang <daisy.wang@erg.com>
Subject: Nitrate Analyses

Hello Dr. Snow:

Thank you for sending the SOPs. I went and reviewed them for preservation methods and the information I read showed that it was 48 hours on ice if no sulfuric acid was used for preserving the samples. If sulfuric was used for

preservation the holding time was 28 days. I did not see any preservation method mention freezing the samples or holding time longer than 48 hours if sulfuric acid was not used. So, my concern is that we did not meet the holding times, if this is the case what would that do to my nitrate results?

Also could you clarify are the results in the excel spreadsheet for Nitrate-Nitrite Nitrogen or just Nitrate?

As for the chain of custody forms could you just scan them and send them via e-mail, so that I have the date and time the Laboratory signed for them.

Sincerely,

Cheryl Burdett
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CAFO Program Manager
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